

## REMARKS

### Overview

The Examiner responded in the prior Office Action as follows: rejected claims 1-70 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,910,799 (Carpenter et al.); appears to have rejected claim 14 under 35 U.S.C. 112 second paragraph as being indefinite due to use of the term “or”; and objected to claims 9 and 10 due to use of the term “UI”.

Applicants hereby amend claims 9, 10, 14 and 33 to clarify the claimed subject matter. Thus, claims 1-70 continue to be pending.

### Discussion

The Examiner has rejected each of the previously pending claims 1-70 under 35 U.S.C. 102(b) as being anticipated by Carpenter. However, each of the pending claims as rejected includes features and provides functionality not disclosed by Carpenter, and thus is allowable over Carpenter.

Carpenter is generally directed to a portable data processing system for providing a location-sensitive user interface (“UI”) by acquiring a geographic location of the portable data processing system and selecting a UI environment associated with the acquired location. Carpenter indicates that “[a]s used herein, the term ‘user interface environment’ refers” to a state of a user interface such as “a particular desktop with particular icons displayed on that desktop,” or that “a software application may be selected as the user interface environment [for use] . . . by launching an instance of the selected software application.” (Carpenter, 4:38-60.) While Carpenter appears to disclose that the icons on the operating system desktop may be modified based on a geographic location, Carpenter appears to include no teaching, suggestion or motivation for modifying the UI elements that are part of a software application’s UI for any reason, nor any teaching, suggestion or motivation how such modification could be performed by the Carpenter system.

Conversely, at least some of the pending claims are generally related to automatically generating a new user interface by identifying and combining various UI elements in an

appropriate manner to reflect current needs of a user, with various claims providing additional details related to adapting a user interface to a user, such as to reflect a level of attention that a user can currently give to the user interface or to reflect current input/output devices that are available. For example, independent method claim 62 recites “retrieving one or more definitions for dynamically combining available user interface elements in an appropriate manner so as to satisfy current needs; and selecting one of the retrieved definitions based on current conditions so that available user interface elements can be combined in an appropriate manner to generate a user interface that is appropriate to be presented to the user.” Thus, for example, one of multiple predefined UI templates or designs may be selected for use in generating a UI that is appropriate to current needs of a user, such as to incorporate voice-based UI element(s) when a user cannot provide attention to visual UI elements (*e.g.*, while the user is driving).

However, as previously noted, Carpenter appears to lack any suggestion or motivation for generating a new user interface by combining user interface elements for any reason, let alone to address current needs. Furthermore, Carpenter does not appear to include any suggestion or motivation to use predefined definitions for dynamically combining UI elements, and it is unclear what the Examiner believes corresponds to such definitions, UI elements and current needs. The Examiner has pointed only generally to lines 55-67 of column 3 (included below for reference purposes) as reciting each and every aspect of the recited claim elements, but the cited text appears completely unrelated to the claimed subject matter, and Applicants can find no suggestion or motivation elsewhere in Carpenter related to such predefined definitions for dynamically combining UI elements that cures this deficiency. Thus, if the Examiner continues to assert that this section of Carpenter is in any manner relevant to the indicated claims, Applicants request that the Examiner indicate with specificity what aspects of the cited portion disclose each of the recited “user interface elements,” “current needs”, “definitions for dynamically combining available user interface elements in an appropriate manner so as to satisfy current needs,” and generating of “a user interface that is appropriate to be presented to the user” by combining “available user interface elements . . . in an appropriate manner.”

This selected user interface environment is then activated as the user interface environment of the portable data processor. Thus, as seen in FIG. 1, a portable data processor, such as a PDA 10, may acquire its geographic location, such as in

the State of North Carolina 22, from a satellite positioning system illustrated as the satellite 20 in FIG. 1. Based upon the acquired geographic location of the portable data processor 10, the portable data processor 10 can select the appropriate user interface environment for its geographic location. For example, the PDA could call up specific applications associated with the State of North Carolina and provide those applications in an highly accessible manner to the user. (Carpenter, 3:55-67.)

Therefore, for at least these reasons, Carpenter does not suggest or motivate the recited claim elements of pending claim 62, and claim 62 is allowable over Carpenter. Moreover, independent claim 65 recites claim elements similar to those of claim 62, and is allowable for at least the same reasons, as are the claims that depend from claims 62 and 65.

In addition, other pending claims recite a variety of additional claim elements that are not taught, suggested or motivated by Carpenter. For example, independent claim 1 generally recites characterizing properties of multiple predefined UIs so that an appropriate predefined UI may be selected for presentation to a user based on current needs of the user, and in particular recites “for each of multiple predefined user interfaces, characterizing multiple properties of the predefined user interface; dynamically determining one or more current needs for a user interface to be presented to the user; and selecting for presentation to the user one of the predefined user interfaces whose characterized properties correspond to the dynamically determined current needs.” For example, if the user is currently performing an activity that completely occupies the user’s vision, such as driving, then the method may select a voice-based UI for interacting with the user because a voice-based UI does not require use of vision.

However, Carpenter does not teach or suggest characterizing multiple properties of predefined user interfaces so that the user interfaces can be matched to dynamically determined current needs, and it is unclear what the Examiner believes corresponds to such characterizing of UI properties and current needs. The Examiner has pointed only generally to lines 50-60 of column 2 (included below for reference purposes) as being related to these recited claim elements, but the cited text appears completely unrelated to the claimed subject matter. Instead, the cited passage merely indicates that Carpenter associates application icons with geographic locations, and fails to teach or suggest any characterizing of multiple properties of multiple predefined UIs or any dynamically determining of current needs for the selection of an

appropriate UI. Thus, if the Examiner continues to assert that this section of Carpenter is in any manner relevant to the indicated claims, Applicants request that the Examiner indicate with specificity what aspects of the cited portion disclose each of the recited claim elements.

When the user interface environment comprises a graphical user interface environment having icons associated with software applications, the user interface environment associated with the acquired location of the portable data processor may be selected from a preselected group of application icons associated with the acquired location of the portable data processor. The user interface environment is activated by incorporating in the graphical user interface environment the selected preselected group of application icons associated with the acquired location of the portable data processor. (Carpenter, 2:50-60.)

Therefore, for at least these reasons, Carpenter does not suggest or motivate the recited claim elements of pending claim 1, and claim 1 is allowable over Carpenter. Moreover, independent computer-readable medium and system claims each recites claim elements similar to those of claim 1, and are each allowable over Carpenter for at least the same reasons, as are the claims that depend from these independent claims.

In a manner similar to claim 1, independent method claim 27 generally recites characterizing properties of multiple predefined UI elements, and further generally recites generating an appropriate UI for presentation to a user based on current needs of the user. In particular, claim 27 recites “determining multiple user interface elements that are available for presentation on the computing device; characterizing properties of the determined user interface elements; dynamically determining one or more current needs for a user interface to be presented to the user; and generating a user interface for presentation to the user, the generated user interface having user interface elements whose characterized properties correspond to the dynamically determined current needs.” For example, if a user is speaking on a cell phone, the method might automatically turn off audio interruptions by generating a new user interface without corresponding audio UI elements, and may further automatically add appropriate visual UI elements (e.g., by projecting such elements on a head-mount display) to alert the user of incoming messages. However, as previously noted with respect to claim 1, Carpenter does not appear to provide any motivation or suggestion for characterizing predefined UIs, and similarly does not appear to provide any motivation or suggestion for characterizing UI elements

determined to be available. In addition, as previously noted with respect to claim 62, Carpenter does not appear to provide any motivation or suggestion for generating a new UI based on selected UI elements. Therefore, for at least these reasons, Carpenter does not suggest or motivate the recited claim elements of pending claim 27, and claim 27 is allowable over Carpenter. Moreover, independent claim 68 similarly recites claim elements related to characterizing UI elements, and therefore is allowable for at least the same reason as claim 27, as are the claims that depend from these independent claims.

Independent claim 40 also generally recites a method for characterizing UIs for presentation to a user, and in particular recites “characterizing [each of multiple predefined user interfaces] by determining an intended use of the predefined user interface; determining one or more user tasks with which the predefined user interface is compatible; and determining one or more computing device configurations with which the predefined user interface is compatible.” However, Carpenter appears to fail to include any teaching, suggestion or motivation for characterizing a UI by determining an intended use of a predefined UI, by determining a user task, or by determining a computing device. Therefore, for the reasons previously discussed with respect to claim 1 regarding the failure of Carpenter to suggest or motivate any characterizing of properties of predefined UIs, as well as for each of these additional reasons, claim 40 is allowable over Carpenter, as are the claims that depend from claim 40.

Similarly, independent claims 44, 48, 51, 54 and 57 each generally recite dynamically determining and using characteristics of a UI, and all but 57 further recite “identifying at least some of the determined characteristics as requirements for a user interface that is currently appropriate to be presented to the user.” However, as previously noted, Carpenter does not teach or suggest dynamically determining and using characteristics of UIs, and each of these claims are thus patentable over Carpenter for at least that reason, as are the claims that depend from those claims. Furthermore, Carpenter does not appear to include any teaching or suggestion to identify some characteristics as requirements for a UI. While the Examiner again generally recites lines 60-67 of column 3 of Carpenter (included above), the cited portion lacks any mention of identifying determined characteristics of a UI as requirements. Thus, if the Examiner continues to assert that this section of Carpenter is in any manner relevant to the indicated claims,

Applicants request that the Examiner indicate with specificity what aspects of the cited portion disclose each of the recited claim elements. Therefore, each of independent claims 44, 48, 51, and 54 are patentable over Carpenter for at least this reason as well, as are the claims that depend from those claims.

Claim 33 as amended generally recites using multiple types of information about a current context of the user to select an appropriate one of multiple user interfaces, and in particular recites “without user intervention, determining that the current context has changed in such a manner that the first user interface is not appropriate for the user, the changed context including multiple of a change in a current location of the user, a change in a current mental state of the user, and a change in one or more devices currently available to the user; and selecting a second user interface that is appropriate for the user based at least in part on the current context”. While Carpenter appears to disclose using a current location to provide information to a user, Carpenter appears to lack any teaching or suggestion to use any other types of information as part of providing such information, and in particular appears to lack any suggestion or motivation to use information about “a change in a current mental state of the user” or about “a change in one or more devices currently available to the user.” Thus, for at least this reason, claim 33 is allowable over Carpenter, as are each of the claims that depend from claim 33.

With respect to the other claim rejections and objections, the Examiner appears to have rejected claim 14 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph as being indefinite due to the phrase “and/or.” However, the Examiner is directed to MPEP § 2173.05(h) regarding alternative limitation language in claims, which states in part “Alternative expressions using ‘or’ are acceptable, such as ‘wherein R is A, B, C, or D’.” This MPEP provision further comports with long-standing judicial caselaw that authorizes the use of such alternative expressions. Thus, Applicants believe that the term “and/or” is not indefinite, and is clearly supported by MPEP § 2173.05(h). Nonetheless, in order to expedite prosecution, Applicants have amended claim 14 so as to remove the term “and/or” and to rewrite the claims in equivalent form using the alternative expression “or” – for example, a claim element represented abstractly as “A and/or B” may be rewritten as the equivalent claim element “A, or B, or A and B.” Such a rewriting of the claim does not narrow or limit the claim scope, and claim 14 continues to be allowable.

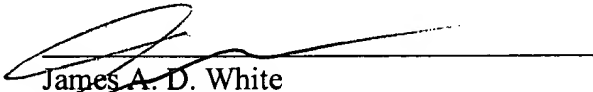
Similarly, the Examiner has objected to claims 9 and 10 due to the claim term "UI." While Applicants dispute that the claim term is ambiguous, they nonetheless have amended claims 9 and 10 in order to expedite prosecution. These amendments do not narrow or limit the claim scope, and claim 9-10 as amended continue to be allowable.

Conclusion

In light of the above remarks, Applicants respectfully submit that all of the pending claims are allowable. Applicants therefore respectfully request the Examiner to reconsider this application and timely allow all pending claims. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 694-4815.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,  
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